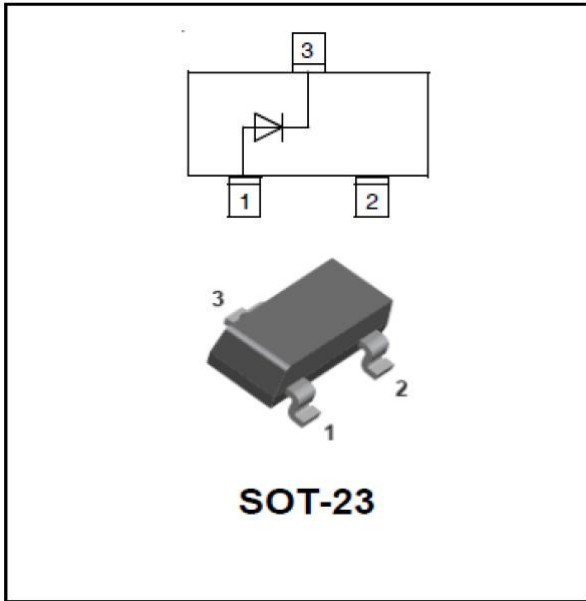


Schottky Barrier Rectifier



Features

- VR 40V
- IF 0.1A
- For Surface Mount Application and High Current Capability
- Low Forward Voltage Drop
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Mechanical Data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** A2

■ Maximum Rating, ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Value
Peak Reverse Voltage	V_{RRM}	V	40
Reverse Voltage	V_R	V	40
Forward Continuous Current	I_F	mA	100
Non-Repetitive Peak Forward Surge Current @8.3ms, Half sine-wave	I_{FSM}	A	1
Repetitive Peak Forward Current@ $t_p=1\text{ms}$, $\delta=0.25$	I_{FRM}	A	0.5
Power Dissipation	P_D	mW	200
Thermal Resistance, Junction to Ambient	R_{thJA}	$^{\circ}\text{C}/\text{W}$	500
Storage Temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +125
Operating Junction Temperature	T_j	$^{\circ}\text{C}$	-55 to +125

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
RB420DS	F2	Approximate 0.009	3000	30000	120000	7" reel



RB420DS

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	MIN	TYP	MAX
Reverse Voltage	V _R	V	I _R =100uA	40		
Forward Voltage	V _F	V	I _F =1mA		0.28	0.35
			I _F =10mA		0.36	0.45
			I _F =100mA			0.6
Reverse Current	I _R	uA	V _R =10V			1
			V _R =40V			5
Diode capacitance	C _j	pF	V _R =0V, f _T =1MHz			25

■ Typical Characteristics

Fig 1: P_D-T_a Curve

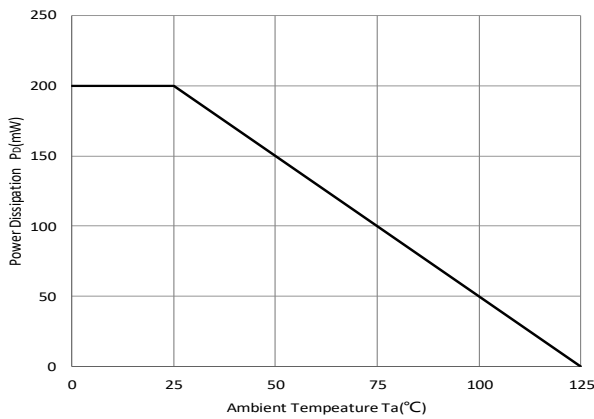


Fig 2: Capacitance Capability

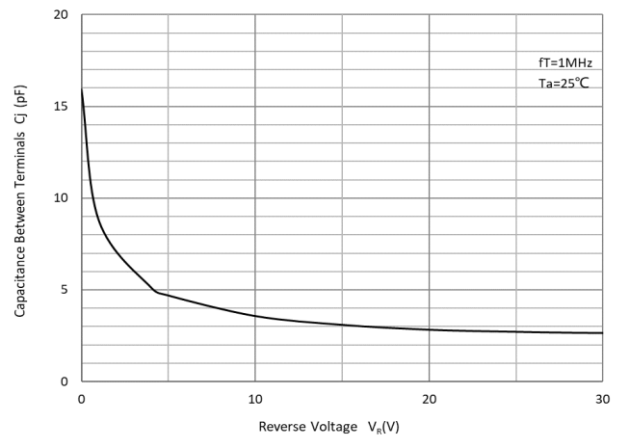


Fig 3: Typical Forward Characteristics

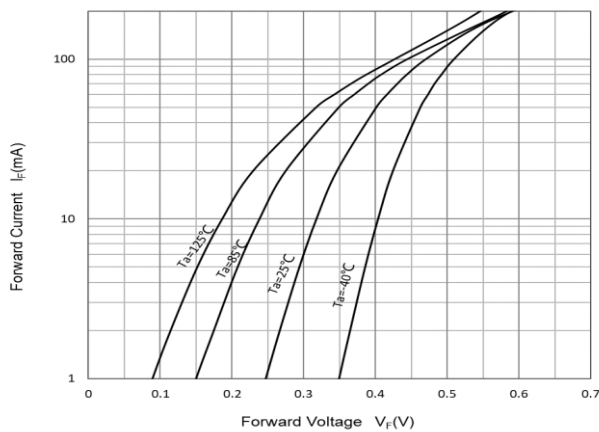
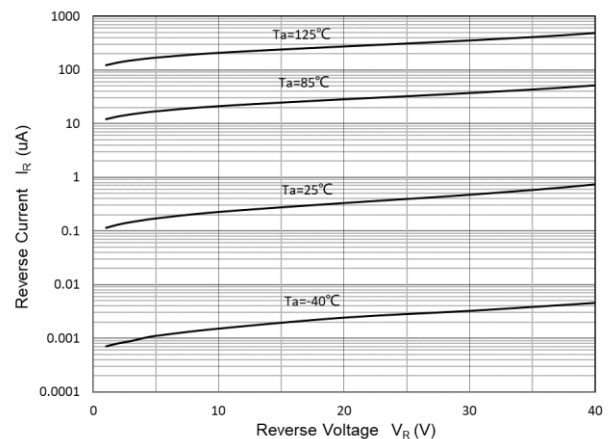


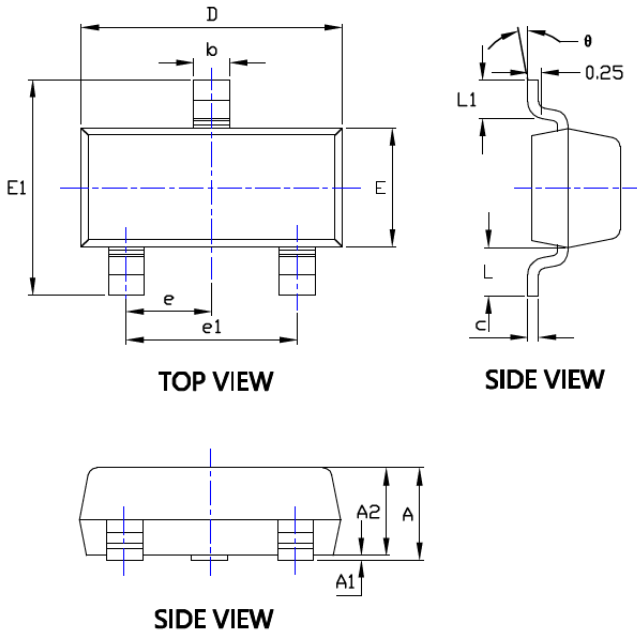
Fig 4: Typical Reverse Characteristics





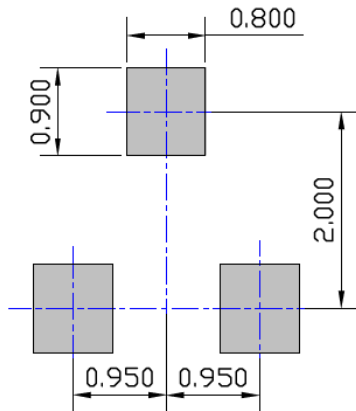
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■SOT-23 Package Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

■SOT-23 Suggested Pad Layout



UNIT: mm

Note:

- All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位, 除非另有说明]
- General tolerances: $\pm 0.10\text{mm}$ unless otherwise specified.
[通用公差为 $\pm 0.10\text{mm}$, 除非另有说明]
- Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
- All dimensions shown are exclusive of burrs and gate residues. Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
- Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 mm的中筋凸出部分]
- Dimensions D and E are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[D和E是塑封体的外部极限尺寸, 不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺, 但是包含了包封错位的最大尺寸]
- Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面, 共面性最大为0.1mm]



RB420DS

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